The City of San Diego
Water Department
Capital Improvements Program
600 B Street, Suite 700
San Diego, CA 92101

AWTP WaterLines

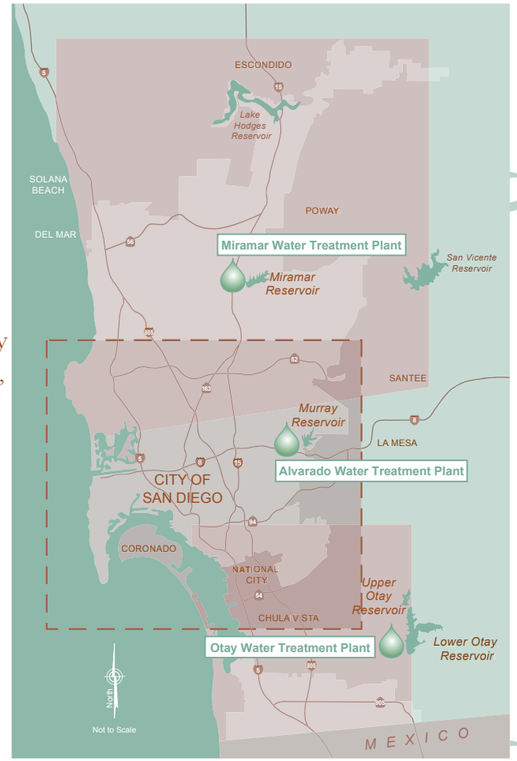
Alvarado Water Treatment Plant Construction Update

Fall 2004

Who Gets Water from the Alvarado Water Treatment Plant?

The population of the City of San Diego is currently more than 1.3 million and is expected to grow to 1.9 million by 2030. If you live or work in the mid-City area, including downtown San Diego, Allied Gardens, Del Cerro, San Carlos, Tierrasanta, City Heights, Mission Valley, Mission and Pacific Beach, and Point Loma, you're using water treated at the Alvarado Water Treatment Plant. The service area within the City that receives water treated at Alvarado WTP is 36,366 acres – more than 54 square miles. Treated drinking water is distributed to our customers through more than 1,050 miles of water pipelines. These pipelines make up the City's distribution system, using the most reliable state-of-the-art technology that monitors water levels, regulates water pressure and water quality.

The construction projects at the Alvarado Water Treatment Plant are designed to ensure the City meets future water needs by increasing the plant's capacity to treat up to 200 million gallons of water per day, while meeting or exceeding new, stricter drinking water standards. Besides the on-going upgrades at the plant, future work includes construction of facilities to disinfect the drinking water, upgrading the 1950's era facilities with new equipment, and various security and landscaping improvements. Additional information can be found online at www.sandiego.gov/water.



Distribution Map

The Water Department Capital Improvements Program is committed to creating a safe and reliable water treatment and distribution system with state-of-the-art facilities at the lowest possible cost to our customers.

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Earl Thomas Reservoir Facts and Figures

- Inside diameter – 406'
- Water depth – 38'
- 2,280 deliveries of 20,600 cubic yards of concrete – *enough concrete to cover a football field, 16 feet thick*
- 58 reels of prestressing strand – 242 miles long if placed end to end – *about the distance from San Diego to Santa Barbara*

THE CITY OF SAN DIEGO

Useful Phone Numbers

Project Information Line:	619-533-4679
Billing Information:	619-515-3500
Recycled Water Program:	619-515-3500
Drinking Water Questions:	619-668-3233
Water Pressure Problems:	619-527-7482
Report a Water Main Break:	619-515-3525
Lakes Recreation Program:	619-465-3474
Speakers Bureau:	619-533-6638
Group Jobs Information:	858-573-5081
Storm Water Pollution Prevention:	619-235-1000
Water Theft Code Enforcement:	619-533-4151
EPA Drinking Water Information:	800-426-4791

This information is available in alternative formats upon request.

Printed on recycled paper.

Did you know…?

Water is so precious, we're recycling it!

In recent years, more than 90 percent of the City's water supply is imported from hundreds of miles away. Although conservation efforts are very successful, by 2030, San Diego will need 25 percent more water than it uses now.

One of our local sources of water is recycled water. The City has begun an in-depth Water Reuse Study to look at all our opportunities to increase our water recycling efforts. We currently have two water recycling facilities. With customers are using millions of gallons each day for landscape irrigation, industrial purposes and other beneficial uses in the City.

The Study will evaluate several opportunities to increase the use of recycled water using a variety of criteria that include public health, economic concerns and environmental effects. Please visit the Study's website at www.sandiego.gov/water/waterreusestudy to find out more about the study. Speakers are also available to come to your group or organization. Please call (619) 533-6638 to request a speaker or send an e-mail to waterreusestudy@sandiego.gov.

Earl Thomas Reservoir Bigger, Better & Stronger

We're pleased to announce work on the world's largest pre-stressed circular drinking water reservoir, the Earl Thomas Reservoir, is ahead of schedule. The contractor is currently applying tensioned, galvanized, multiple-wire strands around the exterior of the Earl Thomas Reservoir in a process called prestressing, the contractor will put the reservoir in service, begin backfilling around the tank and grading the site for fencing, landscaping, and other improvements.

One key improvement of the new 35-million gallon reservoir will be its ability to withstand earthquakes. During an earthquake, concrete can be stressed, causing it to pull apart depending on how the earth moves. Concrete is a lot stronger when it is reinforced and compressed together. For the Earl Thomas Reservoir, steel reinforcements have been added within the concrete to keep it from being pulled apart. And prestressing cables are being wrapped around the exterior of the reservoir, forcing the concrete to stay compressed even if there are large earthquake forces trying to pull it apart. These prestressing cables along with the concrete and steel reinforcement will protect the reservoir and our drinking water during an earthquake.

With the completion of the Earl Thomas Reservoir in late 2004, the Alvarado Water Treatment Plant will have three drinking water storage tanks, which brings the plant's storage capacity to 77-million gallons. These three tanks will help the City manage changes in water demand due to weather, fire, or other emergencies. These reservoirs store treated water produced during low demand times (mid-day and night) for use in the peak times of morning and early evening.

Seismic cables control lateral seismic forces

New Flocculation and Sedimentation Basins at Alvarado Water Treatment Plant

What happens in the flocculation and sedimentation basins?

Treating water to meet our stringent water quality guidelines is a multi-step process. At the cleaning basins, technically called flocculation and sedimentation basins, energy and chemicals are gently applied to the water passing through, allowing dirt and other particles to settle down at the bottom, where they are removed. The clean water from these basin flows to the filters for the final steps of filtration and disinfection.

Contractors Begin Work on Phase II

Work on Phase II of the Alvarado Water Treatment Plant (WTP) Upgrade and Expansion Project began in March 2004. This $29 million phase constructs additional cleaning basins along the southeastern shore of the lake and will increase plant capacity from 150 million gallons of drinking water a day (MGD) to 200 MGD. Previous upgrades to the plant included new chemical handling facilities, additional filters, and the replacement of a 35 million gallon reservoir.

First order of business for the Phase II contractors will be coordinating the excavation of approximately 40,000 cubic yards of dirt. During the dirt hauling operation, the City's construction team will watch for excess dirt and cobble on Kiowa Drive and Lake Murray Boulevard and make sure regular street sweeping takes place.

The Alvarado Water Treatment Plant Upgrade and Expansion Project is part of the Water Department's Capital Improvements Program to increase capacity and reliability to meet current and future water needs. These improvements will ensure our water will meet all future drinking water standards and provide maximum protection of public health.